



Municipal Wastewater Recycling Survey

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Survey Outline

- ❖ Survey History
- ❖ Survey Purpose
- ❖ Survey Procedure
- ❖ Detailed Results
- ❖ Key Challenges
- ❖ Recommendations



Survey History

❖ Water Recycling Funding Program surveys:

Survey Year	Target Recipient Type	Total Use (Acre-Feet/Year)
1987	Producer	267,000
2001	Producer	525,000 (450K-580K)
2009	Producer, Wholesaler/Retailer, Retailer	To be discussed

Survey Purpose

- ❖ Conducting the recycled water survey is necessary to determine the progress being made towards meeting the Water Board Strategic Plan Goal #3 (adopted on September 2, 2008)
- ❖ State Water Board Recycled Water Policy Goals & Mandates (adopted on February 3, 2009)
- ❖ Agency/Public requests for recycled water data
- ❖ Used in California Water Plan update (DWR)

Survey Procedure

- ❖ Survey Development
- ❖ List of Target Agencies/Entities
- ❖ Survey Notification – Email and phone calls
- ❖ Quality Assurance (QA)
 - Follow-up emails and calls (Initial QA)
 - Posting of Initial Results for Agency/Entity feedback (Initial QA)
 - Continued QA (SWRCB and DWR)

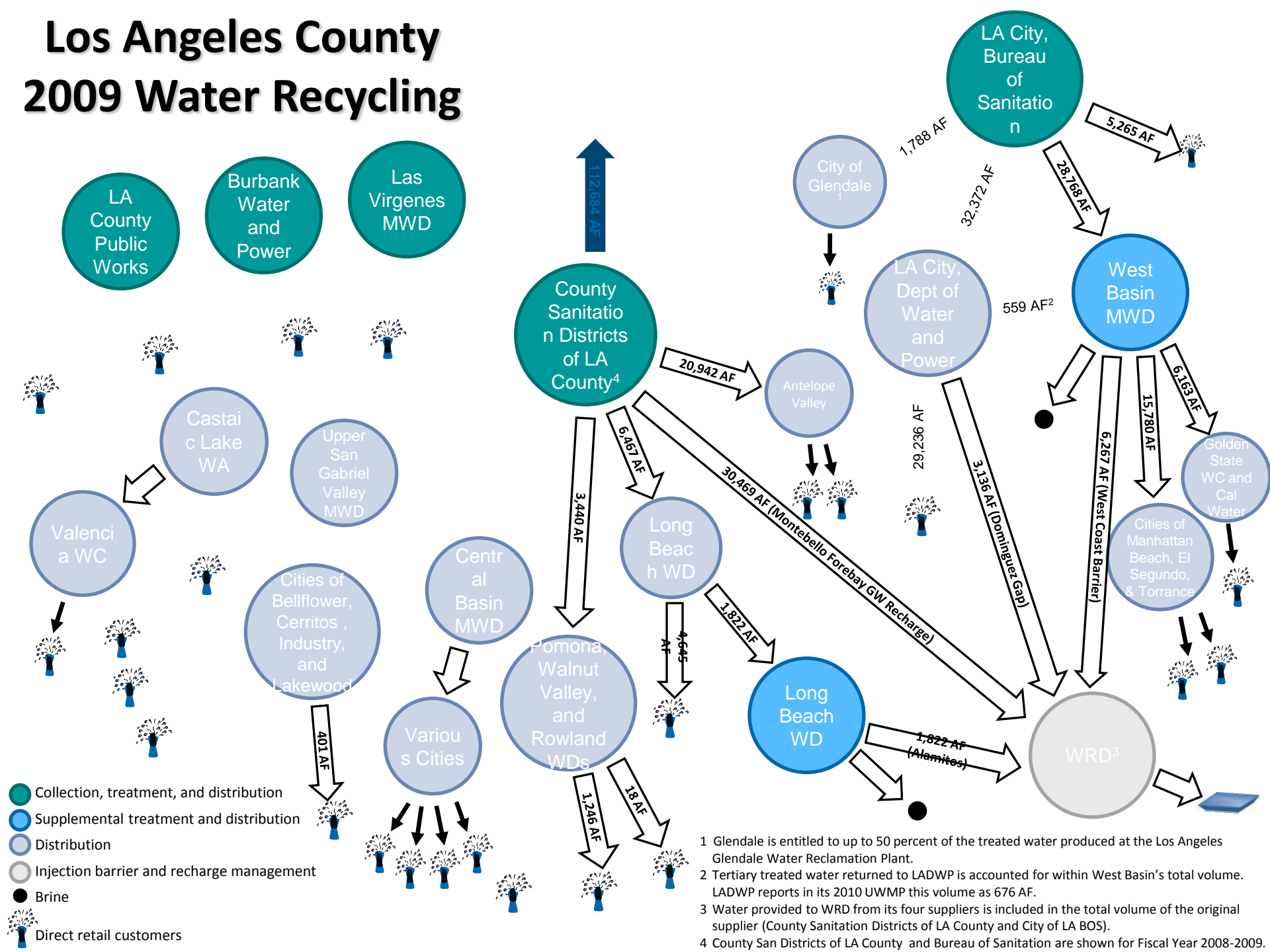
Initial 2009 Results Summary

Total Use
724,000 AF

Response Rate
35%

Carry-Over
30% (by Vol.)

Los Angeles County 2009 Water Recycling



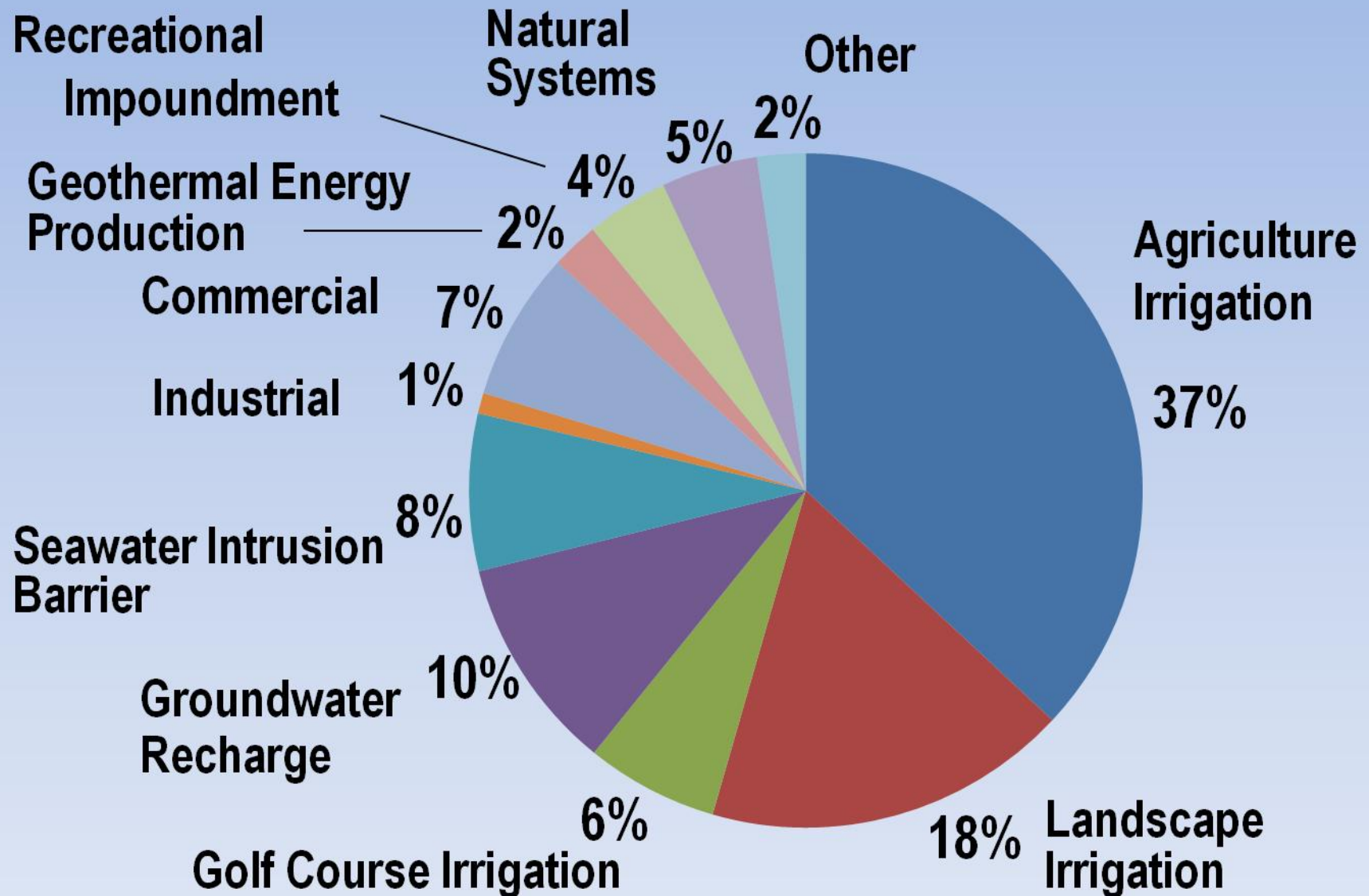
Final 2009 Results Summary

Total Use
658,000 AF

Response Rate
95%

Carry-Over
8% (by Vol.)

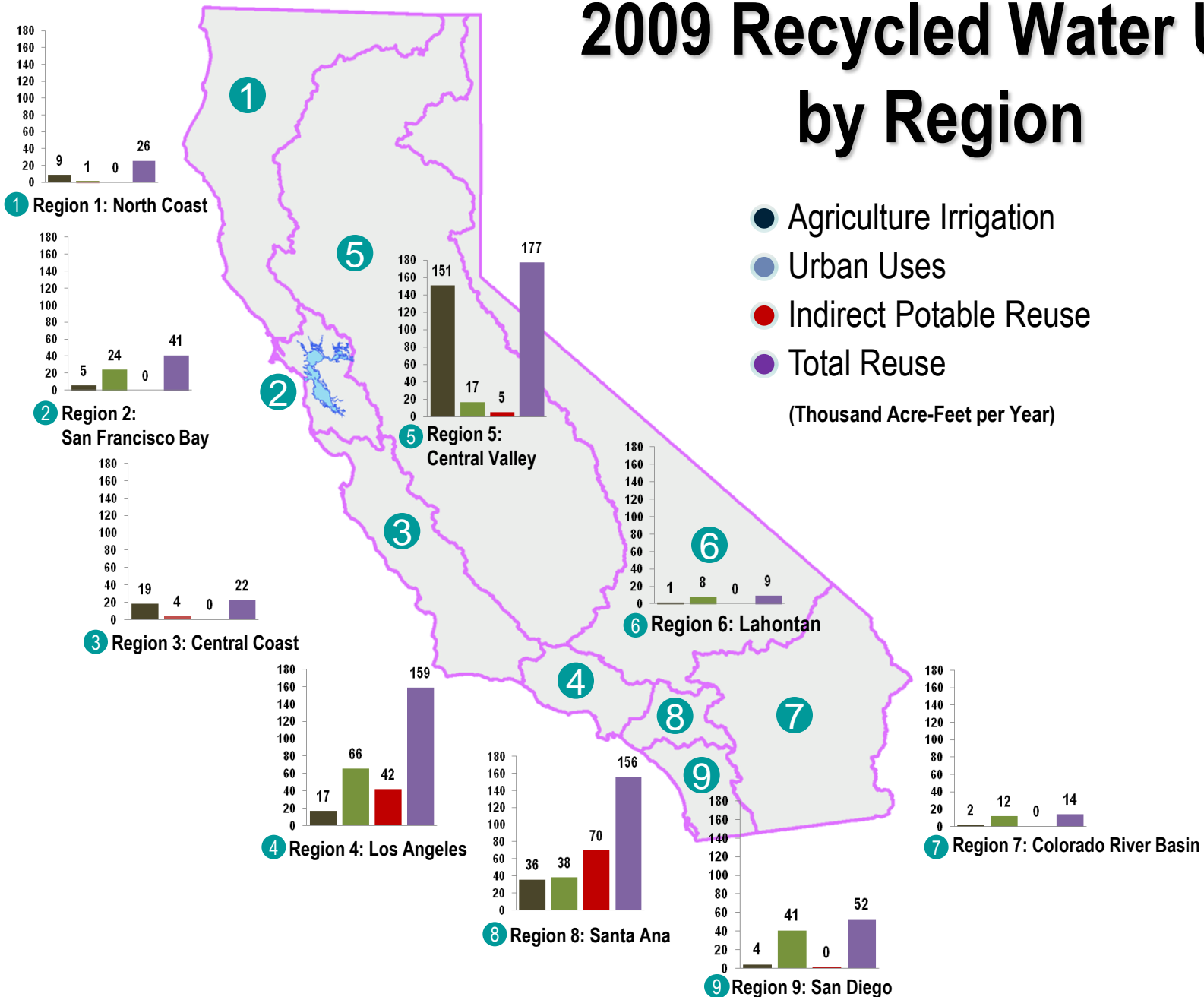
Types of Recycled Water Use in California, 2009



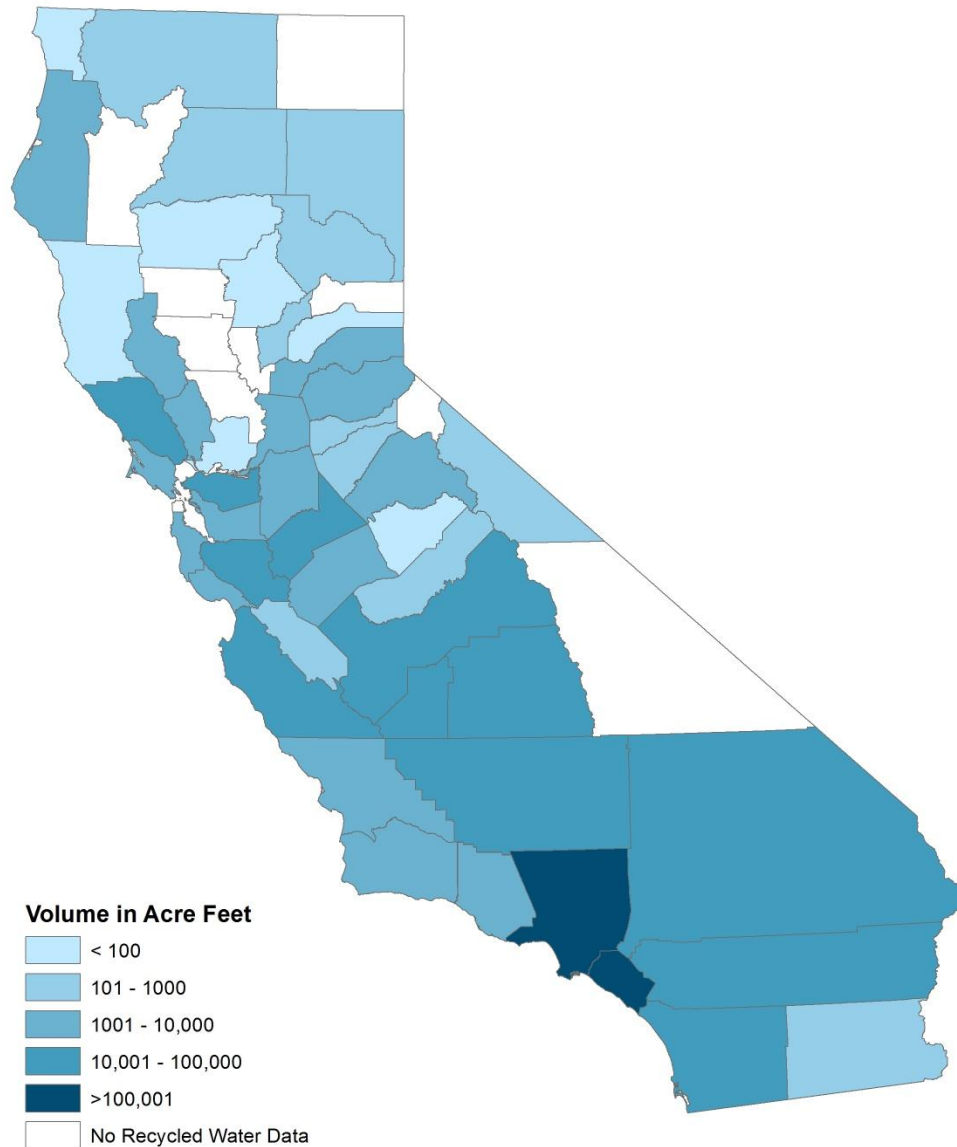
2009 Recycled Water Use by Region

- Agriculture Irrigation
- Urban Uses
- Indirect Potable Reuse
- Total Reuse

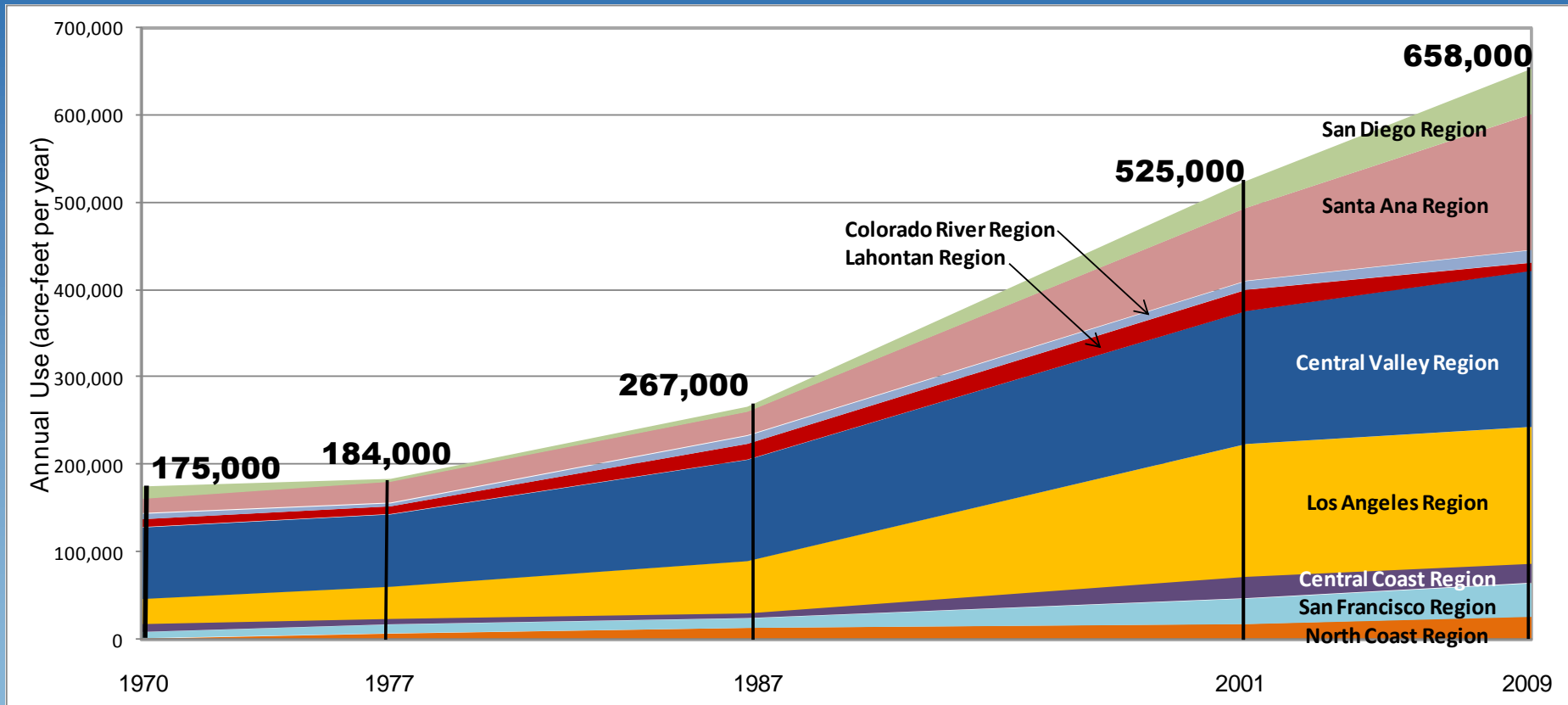
(Thousand Acre-Feet per Year)



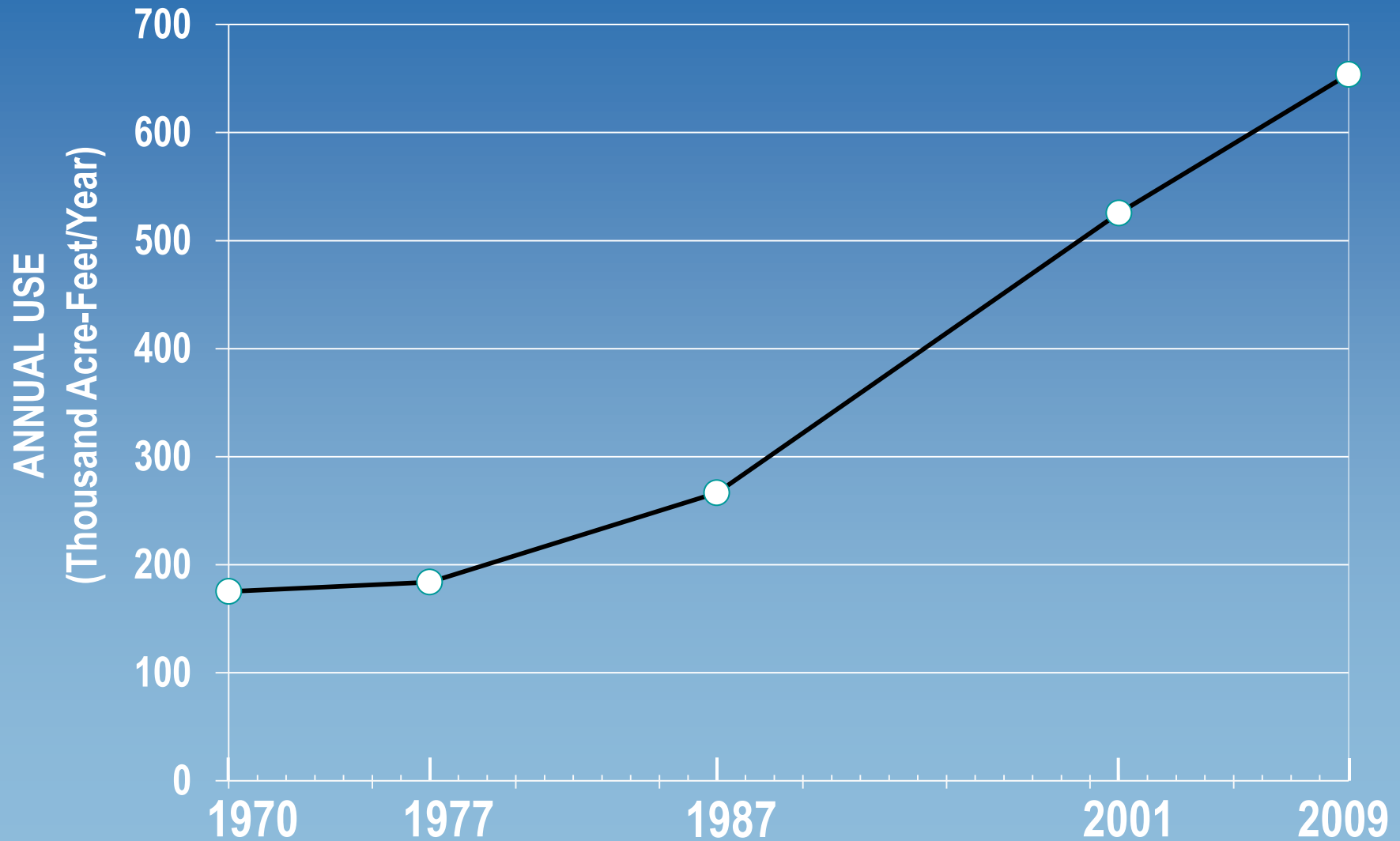
2009 STATEWIDE INTENSITY MAP



Recycled Water Use by Region



Trend In Recycled Water Use



Key Challenges (1 of 2)

- ❖ Voluntary participation by agencies/entities
- ❖ Requires high level of accuracy and response for credible data (minimize carry-over)
- ❖ Maintaining institutional knowledge (staffing, policy, goals, tools)
- ❖ Understanding of complex inter-agency relationships
- ❖ Time and resource intensive
- ❖ Inconsistent reporting of data by staff within the same agency/entity

Key Challenges (2 of 2)

- ❖ Regional variation in the reported recycled water use data
- ❖ Variation in the use of terminology:
 - Municipal Wastewater – Refers to source of wastewater rather than public ownership of facilities.
 - Land Disposal – Disposal may be a beneficial reuse if it results in a usable product such as alfalfa for feed.
 - Groundwater Recharge – Wastewater percolation ponds do not constitute groundwater recharge.

Recommendations (1 of 2)

A) Existing Authority:

- ❖ Require a uniform reporting system for recycled water in the State

B) Survey Approach:

- ❖ Align the next comprehensive survey with the 2015 Urban Water Management Plan Update to coordinate data collection and reporting functions
- ❖ Conduct future interim survey updates in a phased approach to help maintain institutional knowledge with reduced staff resources

Recommendations (2 of 2)

- ❖ Continue to collaborate with WateReuse Assoc., Department of Water Resources, and the wastewater community to refine a process on survey development and implementation
- ❖ Target producers for recycled water data for future surveys
- ❖ Utilize a web accessible database

Questions?

Targeted Survey Recipients

